IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor: Adam R. Schran			
Conf. No.:	7133	Group Art Unit:	2457
Appln. No.:	10/078,815	Examiner:	Avi M. Gold
Filing Date:	February 19, 2002	Attorney Docket No.:	10397-3U1
Title:	SYSTEM AND METHOD FOR DETERMINING NETWORK CONFIGURATION SETTINGS THAT PROVIDE OPTIMAL NETWORK PERFORMANCE		

DECLARATION OF PRIOR INVENTION TO OVERCOME CITED PATENT DOCUMENT (37 C.F.R. § 1.131)

This declaration is being submitted to establish conception of the invention in this application prior to the effective date of U.S. Patent No. 7,222,255 (Claessens et al.) which is February 28, 2001, and which was cited and applied by the Examiner in the outstanding Office Action dated August 17, 2009, coupled with due diligence from prior to February 28, 2001 to the effective filing date of the present application (constructive reduction to practice), which is the filing date of U.S. Provisional Application No. 60/277,463 on March 21, 2001.

The persons making the declaration are the inventors, and are thus qualified to submit this declaration under 37 CFR § 1.131.

TIME OF PRESENTATION OF THE DECLARATION

This declaration is being submitted prior to final rejection.

FACTS AND DOCUMENTARY EVIDENCE

To establish conception of the invention in this application prior to the effective date of Claessens et al., coupled with due diligence from prior to the effective date of Claessens et al. to the effective filing date of the present application (constructive reduction to practice), copies of the following documents and supporting statements are submitted as evidence:

Documents

EXHIBIT 1: Technical Disclosure entitled "ACTIVESPEED" dated February 15, 2001.

EXHBIT 2: Printout of email exchange dated February 22, 2001 between Adam Schran and Clark Jablon regarding Exhibit 1.

EXHIBIT 3: Printout of email exchanges dated March 7, 2001, March 15, 2001 and March 20, 2001 between Adam Schran, Erica Plotnick and Clark Jablon

EXHIBIT 4: Claim chart of independent claims that shows where support exists in Exhibit 1 for each of the claimed features.

Supporting Statements

1. I have reviewed the above-identified documents attached to this Declaration and I have also reviewed the above-identified patent application and the currently pending claims of the patent application.

2. The email of Exhibit 2 was sent to Clark Jablon to assist in the preparation of a provisional patent application which was subsequently filed as U.S. Provisional Application No. 60/277,463 on March 21, 2001.

3. The emails of Exhibit 3 were exchanged in furtherance of the preparation of the provisional application.

4. Erica Plotnick assisted Ascentive LLC in the preparation of the technical disclosure, and was not an inventor of the claimed subject matter.

5. "ActiveSpeed" referred to in the above-identified documents is the commercialized name of one preferred embodiment of the invention recited in the currently pending claims of the patent application.

From the attached documents and supporting statements, I submit that it has been established that the invention in this application was conceived prior to February 28, 2001, and that due diligence from prior to February 28, 2001 to the effective filing date of the present application (constructive reduction to practice) has been shown.

DECLARATION

As a person signing below:

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Full name of first joint inventor: Adam R. Schran

Inventor's Signature: 

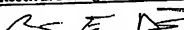
Date: 11/17/2009

Residence: Philadelphia, Pennsylvania

Citizenship: United States of America

Post Office Address: 217 Church St, Apt. 4
Philadelphia, PA 19106

Full name of first joint inventor: Robert E. Darlington III

Inventor's Signature: 

Date: 17-November-2009

Residence: Los Alamos, New Mexico

Citizenship: United States of America

Post Office Address: 2250 38th St Apt A
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Ascentive LLC
1241 Carpenter Street
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ACTIVESPEED

UNITED STATES PATENT OFFICE APPLICATION REQUIREMENTS

February 15, 2001

Prepared By

Erica Plotnick
2412 Berwyn Court
Voorhees, NJ 08043

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Philadelphia, PA 19147

TABLE OF CONTENTS

INVENTION

The proposed invention begins with the use of a computer connected to a network. The client software performs a set of tests to determine optimal network configuration settings. In addition, the client software continuously monitors network performance and automatically adjusts the computer's network configuration settings to achieve and maintain optimal network performance in accordance with the user's specified preferences.

ENTITY RELATIONSHIP DIAGRAM

The following diagram displays a graphical representation of entities included in the invention of ActiveSpeed and the relationship between these entities.

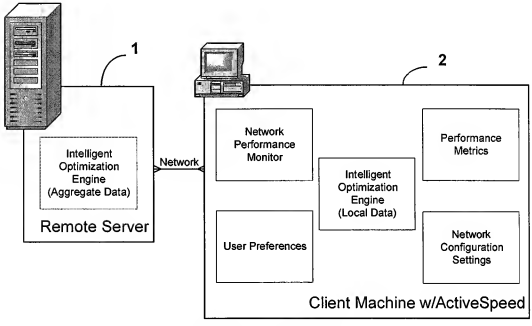

FIGURE 1: ENTITY RELATIONSHIP DIAGRAM

The above diagram depicts the two main objects used by the invention of ActiveSpeed:

1. Remote server with optional Intelligent Optimization Engine
2. Client Computer with ActiveSpeed technology

The client computer with ActiveSpeed will use the network connection to a remote computer to test Performance Metrics based on various Network Configuration Settings in order to achieve desired performance improvements. The Intelligent Optimization Engine uses one or more algorithms to determine the best configuration based on the data accumulated in limited or ongoing performance tests.

OBJECT DETAILS

As displayed in Figure 1, there are six objects combined in the invention of ActiveSpeed: the Network Performance Monitor, Performance Metrics, Remote Server, Network Settings, User Preferences and Intelligent Optimization Engine. The relationships between these objects and how, in conjunction, they make up the Invention are described in further detail below.

NETWORK PERFORMANCE MONITOR

The Network Monitor executes network performance tests in order to obtain Performance Metrics based on specific Network Configuration Settings. As these metrics are acquired, the Network Performance Monitor records them on the client computer.

PERFORMANCE METRICS

The Network Performance Monitor records the Performance Metrics for various network settings on the client computer. This data is used by the Intelligent Optimization Engine to achieve optimal network performance by determining the best network settings for the client computer on a limited or ongoing basis according to the Intelligent Optimization Engine's algorithms. Any appropriate Performance Metrics may be used, including download throughput speed (measured in bytes received per second), upload throughput speed (measured in bytes transmitted per second), latency (measured in milliseconds of ping time), and stability (measured in the percentage of network data packets lost and/or retransmitted).

REMOTE SERVER

The client computer uses the Network Performance Monitor to access the Remote Server. Data received over a network from the Remote Server are used to perform network performance tests in order to establish Performance Metrics. Additionally, the Remote Server can optionally store network settings and performance metrics from one or more client computers using the network-enabled version of the Intelligent Optimization Engine. This data, either solely supplied by the client machine or in aggregate form accumulated from many client machines over time, may be used in algorithms based on the Remote Server, client machine, or both, to determine the best network settings for the client machine on a limited or ongoing basis. The remote server may require an authentication protocol to grant access to the client machine.

NETWORK CONFIGURATION SETTINGS

The Network Configuration Settings on the client computer determine its network configuration and behavior. The Intelligent Optimization Engine determines how the client software should adjust these settings in order to achieve optimal network performance in accordance with the specified User Preferences and algorithms in use by the client machine and/or Remote Server. Any appropriate Network Configuration Settings which may affect Performance Metrics may be used, including, in the case of the Internet's TCP/IP protocol, Maximum Transmission Unit, Maximum Segment Size, Receive Window, Time to Live, Black Hole Detection, and Automatic Discovery of Path Maximum Transmission Unit.

USER PREFERENCES

The user can set network performance preferences on the client computer. The Intelligent Optimization Engine uses these User Preferences in order to determine the correct settings for optimal network performance. One optional User Preference, the Scoring Bias, involves the relative weighting of various Performance Metrics for determining ideal network performance characteristics in the Intelligent Optimization Engine's Scoring Algorithm. In this example, using the above mentioned Performance Metrics, one user may prefer a system with an enhanced download speed, while another may prefer a system with minimized latency. These users may set the Scoring Bias in relative favor of one or more of their preferred Performance Metrics to achieve the desired network performance characteristics of their client machine.

INTELLIGENT OPTIMIZATION ENGINE (LOCAL)

The Intelligent Optimization Engine processes the Performance Metrics data to determine the best Network Configuration Settings to achieve optimal network performance based on the specified User Preferences using one or more algorithms. If network performance is determined to be less than optimal based on these preferences, with optional input from and/or control by the remote Intelligent Optimization Engine according to the algorithm used, the local Intelligent Optimization Engine automatically adjusts the client computer's Network Configuration Settings in order to enhance desired performance characteristics of the client machine.

INTELLIGENT OPTIMIZATION ENGINE (OPTIONAL ON REMOTE SERVER)

The Intelligent Optimization Engine on the Remote Server is an optional component of the Invention. The Intelligent Optimization Engine on the Remote Server stores the network settings and aggregate test results from one or more users of one or more connected client machines. The Intelligent Optimization Engine on the client computer can access recommendations from the Remote Server's Intelligent Optimization Engine in order to determine the optimal network configuration for that specific machine and network connection type.

DATABASE

ActiveSpeed stores Performance Metrics for particular Network Configuration Settings on the client machine. These performance metrics are used locally, and are not stored in a database format. Thus, there is no table structure to document at this time.

ActiveSpeed accesses Network Configuration Settings stored on the client computer. These settings are also not stored in a database format.

In addition, ActiveSpeed can optionally store aggregate from one or more client computers on the Remote Server. This data contains the Network Configuration Settings and network Performance Metrics test results from the client computer(s). Any other appropriately relevant data pertaining to the client machine, Remote Server, and the performance testing may be stored as well. The specified data is stored in the format below.

Remote Client ID Test ID (sequentially generated)
Connection Type (Modem, T1, DSL, etc.) Network Settings Test Results

FIGURE 2: ERWIN DIAGRAM (DATABASE TABLE STRUCTURE)

DETAILED FLOW DIAGRAM

The following high-level functional flowchart demonstrates the process of executing network performance tests to determine the most efficient network connectivity settings of the client machine.

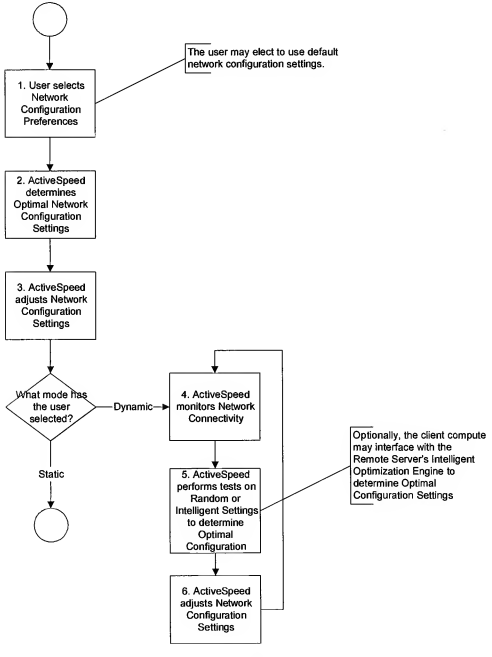

FIGURE 3: DETAILED FLOW DIAGRAM

The following is a detailed description of how the above process is carried out:

1. The user selects their network configuration setting preferences or default settings using the ActiveSpeed software interface.

2. ActiveSpeed conducts a multitude of tests to determine the optimal network configuration settings for the client computer.

3. ActiveSpeed adjusts the network configuration settings to maintain network optimization in accordance with the user preferences.

4. In dynamic mode, ActiveSpeed continuously monitors the network connectivity.

5. ActiveSpeed may make random or intelligent changes to network configuration settings in order to anticipate optimal network performance. Optionally, the client computer may interface with the Remote Server's Intelligent Optimization Engine in order to determine the optimal network configuration settings.

6. If needed, ActiveSpeed automatically adjusts the network configuration settings to maintain optimal network performance in accordance with the user preferences. After making these adjustments, ActiveSpeed will continue to monitor network performance.

ALGORITHMS

The Intelligent Optimization Engine on the client machine or Remote Server may employ any number of appropriate algorithm(s), individually or in conjunction with one another, to determine the best Network Configuration Settings and achieve the desired network performance characteristics for the client machine based on specified User Preferences.

ACTIVE LEARNING ALGORITHM

The Active Learning Algorithm is designed to determine a baseline for network performance on the client computer. Using a series of connectivity tests, performance metrics will be obtained and stored on the client computer. The Active Learning Algorithm will perform these tests with a variety of network setting configurations in order to record accurate performance metrics. The Intelligent Optimization Algorithm may later use these metrics, if the user prefers to be connected to the Internet using Active mode.

INTELLIGENT OPTIMIZATION ALGORITHM

The Intelligent Optimization Algorithm is employed to monitor network connectivity on the client computer. This algorithm monitors network performance and automatically adjusts network configuration settings in order to maintain optimal network performance. The Intelligent Optimization Algorithm performs network connectivity tests in order to determine if network performance is optimal based on user's preferences and previously recorded performance metrics obtained by the Active Learning and Intelligent Optimization Algorithms. Optionally, the aggregate data from these tests may be stored on the Remote Server.

The Intelligent Optimization Algorithm is also employed on the Remote Server to store network configuration settings and test results from one or more client computers. This aggregate data can be accessed by the Intelligent Optimization Engine on the client computer and combined with the locally stored performance metrics in order to determine the optimal network configuration settings.

USER INTERFACE

The ActiveSpeed software application is designed to employ the Invention in its best mode. This application provides an interface, which allows users to select network configuration preferences, as shown below.

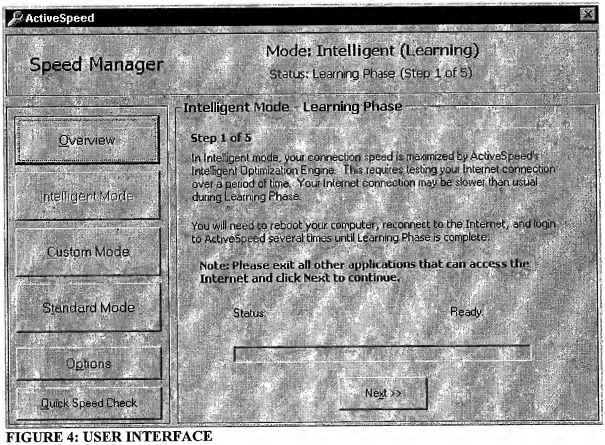

FIGURE 4: USER INTERFACE

EXAMPLES

In the above example, the client computer's network configuration is currently being optimized in Intelligent Mode. The Intelligent Mode button has been selected and information about this mode is displayed in the Speed Manager console. The selection of Intelligent Mode will execute a series of network performance tests in order to obtain performance metrics for the client computer.

ADDITIONAL FUNCTIONALITY

In addition to the invention, the ActiveSpeed software application provides further functionality to the user. This functionality includes the following:

- A graphical interface displaying current network performance
- A graphical interface displaying current status of the Intelligent Optimization Engine
- Authentication protocol to access the Remote Server for performance testing
- Optionally, ability to compare client computer network settings and performance metrics with recommendation provided by the Intelligent Optimization Engine on the Remote Server using an appropriate decision-making algorithm on the client machine or Remote Server's Intelligent Optimization Engine.

HARDWARE CONFIGURATION

CONFIGURATION OF THE INVENTION

The proposed Invention is capable of running on any hardware configuration that is used as part of today's technology. In order to actively monitor network performance, the client software must be able to connect to another computer via the Internet.

BEST MODE CONFIGURATION

Ascentive LLC has designed the ActiveSpeed software application to work with any computer operating system. However, in today's modern marketplace, Microsoft Windows in the most commonly used computer operating system. Therefore, although programming has not been completed for all operating systems, the application is being made available for use with the Microsoft Windows operating system in the following versions: Windows 95, Windows 98, Windows Me, Windows NT and Windows 2000.

EXHIBIT 2
of Declaration of Prior Invention…

X-Server-Uuid: 27d97142-a132-11d3-8f9e-00508b2c7a07
From: "Jablon, Clark" <CJablon@AKINGUMP.com>
To: "'Adam Schran / Ascentive'" <adam.schran@ascentive.com>
Subject: RE: ActiveSpeed technical disclosure
Date: Thu, 22 Feb 2001 17:05:32 -0500
X-Mailer: Internet Mail Service (5.5.2650.21)
X-WSS-ID: 168B526D320511-01-01

Received. We will review it shortly.
-Clark

-----Original Message-----
From: Adam Schran / Ascentive [mailto:adam.schran@ascentive.com]
Sent: Thursday, February 22, 2001 4:54 PM
To: cjablon@akingump.com; swolinsky@akingump.com
Subject: ActiveSpeed technical disclosure

Gentlemen:

The ActiveSpeed technical disclosure is attached for your review. If it looks good, then let's proceed with the provisional.

Adam Schran, CEO
Ascentive - <http://www.ascentive.com/> http://www.ascentive. com
<http://www.ascentive.com/>
+1 (215) 468.1000 x111

Jablon, Clark

From: Jablon, Clark
Sent: Wednesday, March 07, 2001 11:26 AM
To: 'eplotnick@hotmail.com'
Cc: 'adam.schran@ascentive.com'
Subject: RE: Our File No.: 10397- - ActiveSpeed

Adam e-mailed me a version 2 on March 5 that I took a quick look at last night. I assume that this is an update to that version since it says version 3.

Unless I hear from you to the contrary, I will review your version when I take a more detailed look at it.

With respect to Adam's version 2 that I briefly reviewed last night, it appears to address most of the issues in my e-mail, so we may be able to wrap things up and file it by next week after Adam returns.

Clark A. Jablon, Esquire
Akin, Gump, Strauss, Hauer & Feld, L.L.P.
One Commerce Square
2005 Market Street, Suite 2200
Philadelphia, PA 19103-7042
Direct Dial Telephone Number: 215-965-1293
Fax Number: 215-965-1210
e-mail address: cjablon@akingump.com

-----Original Message-----
From: Erica Plotnick [mailto:eplotnick@hotmail.com]
Sent: Wednesday, March 07, 2001 10:47 AM
To: Adam Schran; Jablon, Clark
Subject: Re: Our File No.: 10397- - ActiveSpeed

Mr. Jablon,

Based on correspondence between you and Adam Scran, Adam and I have revised the ActiveSpeed documentation. Attached, please find the most recent version of this document. If there are any additional disclosure requirements needed, please bring them to our attention as soon as possible, as we would like to see this project completed.

Thank you,
Erica Plotnick

Jablon, Clark

From: Adam Schran / Ascentive [adam.schran@ascentive.com]
Sent: Thursday, March 15, 2001 6:29 PM
To: cjablon@akingump.com; eplotnick@hotmail.com
Subject: ActiveSpeed technical disclosure, v4

This includes the changes we discussed:

- A (substitute) screen capture of Intelligent Mode including the Scoring Bias slider bar.
- A caption of the screen capture.
- A detailed example of the Active-Learning Algorithm (p. 12)

Adam Schran, CEO
Ascentive - http://www.ascentive.com
+1 (215) 468.1000 x111

Jablon, Clark

From: Jablon, Clark

Sent: Tuesday, March 20, 2001 7:24 PM

To: 'Adam Schran / Ascentive'

Cc: 'eplotnick@hotmail.com'

Subject: Our File No.: 10397-3US -- ActiveSpeed provisional application

Attached hereto is the provisional application in the final form as we plan to file it tomorrow (Wednesday, March 21). Please review the application, especially pages 1-2 and 20-21, and let us know by noon tomorrow if any last minute changes must be made.

Clark A. Jablon, Esquire
Akin, Gump, Strauss, Hauer & Feld, L.L.P.
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2005 Market Street, Suite 2200
Philadelphia, PA 19103-7042
Direct Dial Telephone Number: 215-965-1293
Fax Number: 215-965-1210
e-mail address: cjablon@akingump.com

EXHIBIT 4
of Declaration of Prior Invention…

Independent claims	Disclosure in Exhibit 1 that supports the claimed features
7. A method of optimizing network configuration settings for a user's client machine, the method comprising:	Page 3: The client software performs a set of tests to determine optimal network configuration settings.
(a) providing a plurality of groups of network configuration settings to be used by the user's client machine;	Page 4: Figure 1 shows Network Configuration Settings in the client machine 2. Page 4 text: The client computer with ActiveSpeed will use the network connection to a remote computer to test Performance Metrics based on various Network Configuration Settings in order to achieve desired performance improvements. Page 5 NETWORK PERFORMANCE MONITOR: The Network Monitor executes network performance tests in order to obtain Performance Metrics based on specific Network Configuration Settings. As these metrics are acquired, the Network Performance Monitor records them on the client computer. Page 8 DATABASE: The Network Monitor executes network performance tests in order to obtain Performance Metrics based on specific Network Configuration Settings. As these metrics are acquired, the Network Performance Monitor records them on the client computer. Page 8: Figure 2 shows a table that illustrates the format used for storing network configuration settings (referred to as "Network Settings." Figure 2 shows that there is a "Test ID" and "Test Results" associated with "Network Settings," thereby illustrating that there is a plurality of groups of network configuration settings. Page 9: Step 1 of Figure 3 shows that the user may elect to use default network configuration settings.

	Page 11, Active Learning Algorithm: The Active Learning Algorithm is designed to determine a baseline for network performance on the client computer. Using a series of connectivity tests, performance metrics will be obtained and stored on the client computer. The Active Learning Algorithm will perform these tests with a variety of network setting configurations in order to record accurate performance metrics. The Intelligent Optimization Algorithm may later use these metrics, if the user prefers to be connected to the Internet using Active mode.
(b) establishing a network connection between the user's client machine and a remote server;	Page 4: Figure 1 shows client machine 2 connected via a network to remote server 1. Page 5 REMOTE SERVER: The client computer uses the Network Performance Monitor to access the Remote Server. Data received over a network from the Remote Server are used to perform network performance tests in order to establish Performance Metrics. Page 11, Active Learning Algorithm: The Active Learning Algorithm is designed to determine a baseline for network performance on the client computer. Using a series of connectivity tests, performance metrics will be obtained and stored on the client computer. The Active Learning Algorithm will perform these tests with a variety of network setting configurations in order to record accurate performance metrics. The Intelligent Optimization Algorithm may later use these metrics, if the user prefers to be connected to the Internet using Active mode.
(c) selecting one of the groups of network configuration settings to be used by the user's client machine from the provided groups of settings, wherein step (c) is initiated on the user's client machine;	Page 10: step 1. The user selects their network configuration setting preferences or default settings using the ActiveSpeed software interface. Page 11, Active Learning Algorithm: The Active Learning Algorithm is designed to determine a baseline for network performance

	on the client computer. Using a series of connectivity tests, performance metrics will be obtained and stored on the client computer. The Active Learning Algorithm will perform these tests with a variety of network setting configurations in order to record accurate performance metrics. The Intelligent Optimization Algorithm may later use these metrics, if the user prefers to be connected to the Internet using Active mode.
(d) automatically conducting one or more performance tests using the selected network configuration settings during the established network connection;	Page 10: step 2. ActiveSpeed conducts a multitude of tests to determine the optimal network configuration settings for the client computer. Page 11, Active Learning Algorithm: The Active Learning Algorithm is designed to determine a baseline for network performance on the client computer. Using a series of connectivity tests, performance metrics will be obtained and stored on the client computer. The Active Learning Algorithm will perform these tests with a variety of network setting configurations in order to record accurate performance metrics. The Intelligent Optimization Algorithm may later use these metrics, if the user prefers to be connected to the Internet using Active mode.
(e) repeating steps (c) and (d) for one or more other groups of network configuration settings during the established network connection; and	Page 10: step 2. ActiveSpeed conducts a multitude of tests to determine the optimal network configuration settings for the client computer. The multitude of tests are performed in accordance with the description highlighted above in step (a), wherein different groups of network configuration settings are tested, each group having its own Test ID providing its own Test Results, as shown in the Figure 2 table. Page 11, Active Learning Algorithm: The Active Learning Algorithm is designed to determine a baseline for network performance on the client computer. Using a series of connectivity tests, performance metrics will be

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34. An article of manufacture for optimizing network configuration settings for a user's client machine, the article of manufacture comprising computer-readable program code for performing a method comprising:	Page 3: The client software performs a set of tests to determine optimal network configuration settings.
(a) providing a plurality of groups of network configuration settings to be used by the user's client machine;	Page 4: Figure 1 shows Network Configuration Settings in the client machine 2. Page 4 text: The client computer with ActiveSpeed will use the network connection to a remote computer to test Performance Metrics based on various Network Configuration Settings in order to achieve desired performance improvements.

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